

CLAIM SET AS AMENDED:

1. (Currently Amended) ~~Method~~ A method for measurement of water content of a liquid, ~~in which method a property of the liquid is measured electrically for one parameter, comprising the steps of:~~

~~— the properties of the liquid are measured at least substantially simultaneously also by another electrical method, whereby the electrically measuring properties of the liquid are measured using both by a relative-value measurement method in order to determine a relative water content of the liquid; and~~
electrically measuring the properties of the liquid by an absolute-value measurement method in order to determine ~~resulting in the measurement of the liquid for its~~ a dielectric coefficient and relative water content of the liquid,

~~characterized in that~~

~~— wherein said measurement is~~ measurements are repeated at two different temperatures in a so rapid succession so that the water content of the liquid ~~may be~~ assumed to stay at least stays substantially constant.

2. (Currently Amended) ~~Method~~ The method according to claim 1, ~~characterized in that the~~ wherein a temperature dependence of the dielectric coefficient of an entirely dry liquid is determined by measuring essentially simultaneously the ϵ_r (ϵ_r) and the temperature of the liquid at at least two temperatures,

wherein $(\epsilon_r) = (\epsilon_0) + F(\text{ppm})$,

wherein (ϵ_0) = dielectric coefficient of entirely dry liquid, and F(ppm) = a function dependent on the water content.

3. (Currently Amended) Method The method according to claim 1, characterized in that wherein said relative water content measurement is carried out using a capacitive sensor.

4. (Currently Amended) Method The method according to claim 1, characterized in that wherein changes in the results of water content ~~measurement~~ measurements due to aging of the liquid are compensated for by virtue of using only the most recent data of the a measurement history for the compensation for changes in ~~the~~ a response of the measurement system.


5. (Currently Amended) Method The method according to claim 1, characterized in that ~~the~~ wherein aging of said liquid, advantageously oil, is indicated on ~~the~~ a basis of changes in the value of the dielectric coefficient of entirely dry liquid (ϵ_0).

6. (Currently Amended) Method The method according to claim 1, characterized in that wherein, in the ~~measurement of~~ step of measuring the relative water content, an auxiliary medium is used for absorbing ~~thereto~~ the water contained in the liquid ~~under measurement~~ being measured.

7. (Currently Amended) ~~Method~~ The method according to claim 5 ~~6~~, ~~character-~~
~~ized in that~~ wherein said auxiliary medium is a thin-film polymer layer.

8. (Currently Amended) ~~Method~~ The method according to claim 5 ~~6~~, characterized
~~in that~~ wherein the water content of said auxiliary medium is determined by ~~way of~~
measuring its dielectric coefficient.

9. (Currently Amended) ~~Apparatus~~ An apparatus for ~~measurement of the~~
measuring water content of a liquid, said apparatus comprising:

 ~~one~~ first electrical sensor means (~~5, 6 or 1, 6~~) for measuring a first parameter of
the water content of a ~~the~~ liquid, ~~which apparatus includes; and~~

— ~~a~~ second electrical sensor means (~~1, 6 or 5, 6~~) for measuring a second parameter of
the water content of a liquid, ~~said second sensor means (1, 6 or 5, 6) measuring a~~
~~different parameter than that measured by~~ said first electrical sensor means (~~5, 6~~
~~or 1, 6~~), ~~said sensor means being such that one of them measures the~~ measuring
properties of the liquid by a relative-value measurement method, and ~~the other~~
said second electrical sensor means measuring the properties of the liquid by an
absolute-value measurement method, whereby ~~one~~ the second sensor means (~~5, 6~~)
is sensitive to changes in the dielectric coefficient, and the ~~other~~ first sensor means
is sensitive to the relative water content,

characterized in that

wherein the first sensor means adapted for measuring the relative water content ~~contain~~ contains an auxiliary medium capable of absorbing water contained in the liquid ~~under measurement~~ being measured.

10. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 9, ~~e-h-a-r-a-e~~
~~t-e-r-i-z-e-d-i-n-t-h-a-t~~ wherein said second sensor means (~~5, 6~~) sensitive to changes in
dielectric coefficient is formed by two interdigitated finger electrodes (~~5, 6~~).

11. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 9,
Don't ~~characterized in that~~ wherein one electrode (~~6~~) of the ~~sensor pair~~ two interdigitated finger
electrodes of the second sensor means adapted to perform the measurement of dielectric
coefficient also forms a part of ~~the~~ a measurement electrode pair (~~1, 6~~) of the first sensor
means adapted to perform the measurement of the relative water content.

12. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 9, ~~e-h-a-r-a-e~~
~~t-e-r-i-z-e-d-i-n-t-h-a-t~~ wherein the second sensor means sensitive to changes in the dielectric
coefficient is formed by a coaxial structure, wherein one electrode is formed by a center
pin and ~~the~~ a jacket has having a net-like structure ~~and is, the one electrode being~~
permeable to water.

13. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 12, ~~e-h-a-r-a~~
~~e-t-e-r-i-z-e-d-i-n-t-h-a-t~~ wherein said auxiliary medium is a thin-film polymer layer.

14. (Currently Amended) ~~Apparatus~~ The apparatus according to claim 12,
~~characterized in that~~ wherein the apparatus contains means adapted to measure the
dielectric coefficient of said auxiliary medium whereupon the relative water content of
said auxiliary medium can be determined.
